

95-100 MOBILE 902. MOBILE-SATELLITE. RADIONAVIGATION. RADIONAVIGATION- SATELLITE. Radiolocation. 903 904	95-100 MOBILE 902. MOBILE-SATELLITE. RADIONAVIGATION. RADIONAVIGATION- SATELLITE. Radiolocation. 903 904	RADIO FREQUENCY DEVICES (15).	
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102-105 FIXED. FIXED-SATELLITE (space-to-Earth). 722 US211	102-105 FIXED. FIXED-SATELLITE (space-to-Earth). 722 US211	DOMESTIC PUBLIC FIXED (21). RADIO FREQUENCY DEVICES (15).	
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116-126 EARTH EXPLORATION- SATELLITE (passive). FIXED. INTER-SATELLITE. MOBILE. 909 SPACE RESEARCH (passive). 722 915 916 US211 US263	116-126 EARTH EXPLORATION- SATELLITE (passive). FIXED. INTER-SATELLITE. MOBILE. 909 SPACE RESEARCH (passive). 722 915 916 US211 US263	DOMESTIC PUBLIC FIXED (21). RADIO FREQUENCY DEVICES (15).	122.5 GHz \pm 500 MHz: Industrial, scientific and medical frequency.
126-134 FIXED. INTER-SATELLITE. MOBILE. 909 RADIOLOCATION. 910	126-134 FIXED. INTER-SATELLITE. MOBILE. 909 RADIOLOCATION. 910	DOMESTIC PUBLIC FIXED (21). RADIO FREQUENCY DEVICES (15).	
134-142 MOBILE 902 MOBILE-SATELLITE. RADIONAVIGATION. RADIONAVIGATION- SATELLITE. Radiolocation. 903 917 918	134-142 MOBILE 902 MOBILE-SATELLITE. RADIONAVIGATION. RADIONAVIGATION- SATELLITE. Radiolocation. 903 917 918	RADIO FREQUENCY DEVICES (15).	

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151-164 FIXED. FIXED-SATELLITE.	151-164 FIXED. FIXED-SATELLITE.	DOMESTIC PUBLIC FIXED (21). RADIO FREQUENCY DEVICES (15).	
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3. Section 2.997 is amended to read as follows:

Section 2.997 Frequency spectrum to be investigated.

(a) In all of the measurements set forth in Sections 2.991 and 2.993 of this Part, the spectrum shall be investigated from the lowest radio frequency signal generated in the equipment, without going below 9 kHz, up to at least the frequency shown below:

(1) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the equipment operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the equipment operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

(b) Particular attention should be paid to harmonics and subharmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency. Radiation at the frequencies of multiplier stages should also be checked.

(c) The amplitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be reported.

(d) Unless otherwise specified, measurements above 40.5 GHz shall be performed using a minimum resolution bandwidth of 1 MHz.

II. Part 15 of Title 47 of the Code of Federal Regulations is revised to read as follows:

The authority citation for Part 15 continues to read as follows:

AUTHORITY: Sec. 4, 302, 303, 304, and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 302, 303, 304, and 307.

2. Section 15.33 is amended by revising paragraph (a) to read as follows:

Section 15.33 Frequency range of radiated measurements.

(a) For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown below:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

(4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

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3. Section 15.35 is amended by revising paragraph (b) to read as follows:

Section 15.35 Measurement detector functions and bandwidth.

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(b) On any frequency or frequencies above 1000 MHz, unless otherwise stated, the radiated limits shown are based on the use of measurement instrumentation employing an average detector function. When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. Measurements of AC power line conducted emissions are performed using a CISPR quasi-peak detector, even for devices for which average radiated emission measurements are specified.

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4. Section 15.205 is amended by adding a new paragraph (d)(4) to read as follows:

Section 15.205 Restricted bands of operation.

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(d) * * *

(4) Any equipment operated under the provisions of Section 15.253.

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5. A new Section 15.253 is added to read as follows:

Section 15.253 Operation within the bands 47.2-47.4 GHz, 59.0-64.0 GHz, 71.5-72.0 GHz, 76.0-77.0 GHz, 84.5-85.0 GHz, 94.7-95.7 GHz, 103.5-104.0 GHz, 116.5-117.0 GHz, 122.5-123.0 GHz, 126.5-127.0 GHz, 139.0-140.0 GHz and 152.5-153.0 GHz.

(a) Operation under the provisions of this section is not **permitted on aircraft**.

(b) Operation within the bands 47.2-47.4 GHz, 76.0-77.0 GHz, 94.7-95.7 GHz and 139.0-140.0 GHz is restricted to devices whose primary mode of operation is as a vehicular-mounted field disturbance sensor. The transmission of additional information, such as data, is permitted provided the primary mode of operation is as a vehicular-mounted field disturbance sensor.

(c) The radiated emission limits above 47.2 GHz are as follows:

(1) The power density of any emission within the bands specified in this section shall not exceed 200 nanowatts/square centimeter at 3 meters, except that the power density of any transmitter used as a field disturbance sensor pursuant to paragraph (b) shall not exceed 30 microwatts/square centimeter at 3 meters when the vehicle is moving at a minimum rate of one kilometer/hour.

(2) The power density of any emissions outside the bands specified in this section shall not exceed 2 picowatts/square centimeter at 3 meters.

(3) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range -20 to +50 degrees celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

(4) The limits in this paragraph are based on instrumentation employing an average detector.

(d) Radiated emissions below 47.2 GHz shall not exceed the general limits in Section 15.209 of this Part. The provisions in Section 15.35 of this Part for averaging pulsed emissions and for limiting peak emissions apply. Further, the provisions in Section 15.205 of this Part that limit spurious emissions appearing in the restricted bands below 40 GHz also apply.